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National Standard for Rice (GB-T 1354-2018)

Report Categories:

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FAIRS Subject Report

Approved By:

Michael Ward

Prepared By:

Gene Kim

Report Highlights:

On October 10, 2018, China's State Administration for Market Regulation (SAMR) published a new national standard for rice (GB/T 1354-2018), replacing GB/T 1354-2009. The new national standard for rice applies to both domestically produced and imported rice, narrowing grading specifications for each class of rice. Some of the technical terms in this standard reference international standards. GB/T 1354-2018 will take effect on May 1, 2019. This report provides an unofficial English translation of the standard. Presently, this standard, in the original Mandarin, is not published on a Chinese government website.

Executive Summary: On October 10, 2018, China's State Administration for Market Regulation (SAMR) published a new national standard for rice (GB/T 1354-2018), replacing the GB/T 1354-2009. The domestic comment period for the draft standard closed on August 10, 2017. This standard was not notified to the WTO for trading partner comment. According local analysts, the reforms made in this standard are aimed at promoting expanded trade of rice to and from China. Given China's current dynamic food regulatory environment, it is highly recommended that U.S. exporters verify the full set of import requirements with their foreign customers prior to shipping goods to the Chinese market. GB/T 1354-2018 will take effect on May 1, 2019.

General Information:

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General Administration of Customs of the People's Republic of China State Administration for Market Regulation

National Standards of the People's Republic of China
GB/T 1354-2018
Substituting GB/T 1354-2009

1. Scope

This Standard stipulates the terms and definitions, the classifications, the quality requirements, the inspection methods, and the inspection rules of rice, as well as the requirements for package, labels, storage and transportation of rice.

This Standard applies to the commodity rice milled from the raw materials including the paddy, husked rice or semi-polished rice.

2. Normative References

The following documents are essential for the application of the Document. For all dated references, only the dated versions apply to this Document. For all references not dated, their latest versions (including all modification lists) apply.

The following documents are essential for the application of the Document. For all dated references, only the dated versions apply to this Document. For all references not dated, their latest versions (including all modification lists) apply.

GB/T 191 Packaging - Pictorial Marking for Handling of Goods
GB 2715 National Food Safety Standards - Grain
GB 5009.3 National Food Safety Standards - Determination of moisture in foods
GB/T 5490 Inspection of Grains, Oil, Vegetable Oil and Fat - General rules
GB/T 5491 Inspection of Grains and Oilseeds—Methods for Sampling and Sample Reduction
GB/T 5492 Inspection of Grains and Oils - Identification of Color, Odor and Taste of Grain and Oilseeds
GB/T 5493 Inspection of Grains and Oils - Determination of Type Purity and Their Mixture

GB/T 5494 Inspection of Grains and Oils - Determination of Foreign Matter and Unsound Kernels of Grain and Oilseeds

GB/T 5496 Inspection of Grains and Oilseeds - Methods for Determination of Yellow-colored Rice and Cracked Kernels

GB/T 5502 Inspection of Grains and Oils - Determination of Processing Degree of Rice and Other Grain Kernels

GB/T 5503 Inspection of Grains and Oilseeds - Methods for determination of broken rice

GB 7718 National Food Safety Standards - General Standards for the Labeling of Pre-packaged Foods

GB/T 15682 Inspection of Grain and Oils - Method for Sensory Evaluation of Paddy or Rice Cooking and Eating Quality

GB/T 15683 Rice - Determination of Amylose Content

GB/T 17109 Packaging of Grain Sales

GB/T 26631 Inspection of Grains and Oilseeds – Physicochemical Property and Quality

GB 28050 National Food Safety Standards - General Standard For the Labeling of Nutrition of Pre-packaged Foods

GB/T 35881 National Food Safety Standards – Testing of Paddy Yellow Kernel Content, Image Analysis

JJF 1070 Rules of Metrological Testing for Net Quantity of Products in Pre-packages with Fixed Contents

LS/T 1533 Rice Color Level of Yellow Index Standard Sample

LS/T 1534 Japonica Rice Tasting Evaluation Reference Sample

LS/T 1535 Indica Rice Tasting Evaluation Reference Sample

LS/T 15121 Early Indica Rice Polishing Standard Sample

LS/T 15122 Late Indica Rice Polishing Standard Sample

LS/T 15123 Japonica Rice Polishing Standard Sample

Measures for the Metrological Supervision and Administration of Quantitatively Packed Commodities (Decree of General Administration of Quality Supervision, Inspection and Quarantine of the P.R.C [2005] No. 75)

3. Terms and Definitions

GB/T 26631 defined and the following terms and definitions apply to the Standards..

3.1 Semi-finished rice

Half-finished products, in the process of processing from paddy to rice, received certain level of production and processing but still need further processing.

3.2 Broken kernels

The kernels not integral with the length less than 3/4 of the average length (3.3) of the whole kernels (3.4) in the sample of the same batch, which can be left on a circular screen with a diameter of 1.0 mm.

3.2.1 Large Broken Kernels

The kernels not integral with the length less than 3/4 of the average length (3.3) of the whole kernels (3.4) in the sample of the same batch, which can be left on a circular screen with a diameter of 2.0 mm.

3.2.2 Small Broken Kernels

The kernels not integral, capable of going through a circular screen with diameter of 2.0 mm but being left on a circular screen with a diameter of 1.0 mm.

3.3 Average Length

The arithmetic mean length value of the whole kernels (3.4) in the sample

3.4 Whole kernels

Integral kernels without damaged parts except the germ.

3.5 Milling Degree

The degree of rice germ residues after milling and the degree of cortex residues on the rice kernel surface and back groove after milling. The milling degree can be divided into well milled (3.5.1) and reasonably well milled (3.5.2).

3.5.1 Well Milled: the kernel has hardly any cortex in the back groove, or the existing cortex cannot form a line, 80%-90% of the germs and cortex on the surface are totally removed; the Bran Degree (3.5.3) is below 2.0%.

3.5.2 Reasonably Well Milled: the kernel has cortex in the back groove, 75%-85% of the kernels has cortex residue not exceeding 1/5, among which less than 20% of the *japonica* and good quality *indica* kernels has germs.

3.5.3 Bran Degree

When placed horizontally, the percentage of the total projective shallow area of cortex residue and germ and the projective area of sample kernel.

3.6 Defective Kernel

Includes Immature Kernel (3.6.1), Wormy Kernel (3.6.2), Spotted Kernel (3.6.3), Moldy Kernel (3.6.4) and Husked Rice (3.6.5) and other rice kernel which still has edible value.

3.6.1 Immature Kernel

Rice kernels not full, being fully powdery.

3.6.2 Wormy kernel

Rice kernels injured by worms.

3.6.3 Spotted kernel

Rice kernels with disease spots on the surface.

3.6.4 Moldy kernel

Rice kernels with mold spots on the surface.

3.6.5 Husked rice kernel

Rice kernels with cortex not totally removed.

3.7 Foreign Matter

Other matters except rice kernels, including organic (3.7.1) and inorganic extraneous matters (3.7.2).

3.7.1 Organic foreign matter

Including the plant source and animal source extraneous matters like rice bran powder (3.7.3), paddy, husk, kernels from other grains, etc.

3.7.2 Inorganic foreign matter

Including mud, sand, dust and other inorganic extraneous matters.

3.7.3 Rice bran powder

Substance passed 1.0 mm diameter sift and powder substance attached to the sift

3.8 Yellow-colored kernel

The rice kernels having yellow endosperms obviously different from the normal rice kernels, or those in line with or darker than the (LS/T 1533) color.

3.9 Other kind rice kernel percentage

Percentage of the kernels that are difference in shape and look from the same kind of rice in the same batch

3.10 Chalkiness degree

The rice kernels with opaque white parts (including white belly, white core and white back) in endosperm are chalky kernels. When the chalky kernels are placed horizontally, the percentage of the total chalky area of the chalky kernels in the total projection area of the kernels of the sample is the chalkiness degree.

3.11 Taste evaluated value

The sum of the evaluated values based on all factors of the cooked rice, including odor, color, appearance structure, taste, etc.

3.12 Amylose content

The proportion of the amylose mass in the total sample mass.

3.13 Milled long-grain non-glutinous rice, indica rice

Rice made by indica non-glutinous paddy rice

3.14 Milled medium to short-grain non-glutinous rice, japonica rice

Rice made by japonica non-glutinous paddy rice

3.15 Milled waxy rice, milled glutinous rice

Rice made by glutinous paddy rice, including indica glutinous rice (3.15.1) and japonica glutinous rice (3.15.2)

3.15.1 Milled long-grain waxy rice, milled long-grain glutinous rice

Rice made by indica glutinous paddy rice. In shape of oval or long grain, milky white, nontransparent, some may be semi-transparent, sticky.

3.15.2 Milled medium to short-grain waxy rice, milled medium to short-grain glutinous rice.

Rice made by Japonica glutinous paddy rice. In shape of oval, milky white, nontransparent, some may be semi-transparent, sticky.

4. Classification

The classification can be rice and high quality rice based on eating quality. Based on the type of paddy as the raw materials, the rice can be divided into milled *indica* rice, milled *japonica* rice, milled *indica* glutinous rice, and milled *japonica* glutinous rice; the high quality rice can be further divided into high quality milled *indica* rice and high quality milled *japonica* rice.

5. Quality Requirements

5.1 Quality indicators

5.1.1 For the quality indicators of rice, refer to Table 1, and the grading indicators include “broken kernels,” “which include: small broken kernels” and the “milling degree”, and “defective kernel.”

Table 1 Quality Indicators of Rice

Variety		Milled indica rice			Milled japonica rice			Milled indica glutinous rice		Milled japonica glutinous rice	
Grade		Grade I	Grade II	Grade III	Grade I	Grade II	Grade III	Grade I	Grade II	Grade I	Grade II
Broken kernels	Total quantity/(%) ≤	15.0	20.0	30.0	10.0	15.0	20.0	15.0	25.0	10.0	15.0
	In which: small broken kernels/(%) ≤	1.5	2.0	2.5	1.0	1.5	2.0	2.0	2.5	1.5	2.0
Milling degree		Fine milling	Fine milling	Proper milling	Fine milling	Fine milling	Proper milling	Fine milling	Proper milling	Fine milling	Proper milling
Water/(%) ≤		14.5			15.5			14.5		15.5	
Unsound kernels /% ≤		2.0									
Maximum limits of extraneous matters	Total quantity/(%) ≤	0.25									
	In which: organic extraneous matters/(%) ≤	0.15									
	Inorganic extraneous matters/(%) ≤	0.02									
Yellow-colored kernels /(%) ≤		1.0									

Other kind rice kernels/ (%) ≤	5.0
Color, odor	No abnormal color or odor

5.1.2 For the quality indicators of high quality rice, refer to Table 2, and the grading indicators include: “broken kernels,” “in which: small broken kernels,” the “milling degree,” the “chalkiness degree,” and the “eating quality after being steamed or boiled” (the “taste evaluated value”).

Table 2 Quality Indicators of High Quality Rice

Variety			High quality milled indica rice			High quality milled japonica rice		
Grade			Grade I	Grade II	Grade III	Grade I	Grade II	Grade III
Broken kernels	Total quantity/% ≤		10.0	12.5	15.0	5.0	7.5	10.0
	In which: small broken kernels/% ≤		0.2	0.5	1.0	0.1	0.3	0.5
Chalkiness degree /% ≤			1.0	3.0	5.0	1.0	3.0	5.0
Eating quality after being steamed or boiled	I	Taste evaluated value / points ≥	90	80	70	90	80	70
	II	Amylose content (Dry basis)/%	13.0 ~ 18.0	13.0 ~ 20.0	13.0 ~ 22.0	13.0 ~ 18.0	13.0 ~ 19.0	13.0 ~ 20.0
Milling degree			Fine milling	Fine milling	Proper milling	Fine milling	Fine milling	Proper milling
Water/% ≤			14.5			15.5		
unsound kernels/% ≤			2.0					
Maximum limits of extraneous matters	Total quantity/% ≤		0.25					
	In which: organic extraneous matters/% ≤		0.15					
	Inorganic extraneous matters/% ≤		0.02					
Yellow-colored kernels/% ≤			1.0					
Other kind rice kernels/% ≤			5.0					
Color, odor			No abnormal color or odor					

5.2 Hygiene requirements

5.2.1 The requirement shall be enforced in accordance with food safety standards and laws and regulations.

5.2.2 The plant quarantine and inspection shall be enforced in accordance with relevant standards and

relevant state regulations.

5.3 Net content

The net content shall meet the stipulations in *Measures for the Supervision and Management of Quantitative Packaging Commodities*.

6. Inspection methods

6.1 The inspection of average length: pick 10 kernels at random, place them on a black board, put them in a line connected with head to head, end to end without space. Read the length and divided by 10 is the average length. Double test error rate should be less than 0.5mm.

6.2 The inspection of broken kernels: implement the methods stipulated in GB/T 5503

6.1 The inspection of color and odor: implement in the method stipulated in GB/T 5492.

6.2 The inspection of other kinds of rice kernels: implement in the method stipulated in GB/T 5493.

6.3 The inspection of milling degree: implement the methods stipulated in GB/T 5502. Milling degree standard sample shall follow the latest LS/T 15121, LS/T 15122 or LS/T 15123.

6.4 The inspection of extraneous matters and unsound kernels: implement in the method stipulated in GB/T 5494.

6.5 Chalkiness degree inspection: implement the methods stipulated in appendix A.

6.6 The inspection of moisture: implement the methods stipulated in GB 5009.3.

6.7 The inspection of yellow-colored kernels: implement in the methods stipulated in GB/T 5496 and GB/T 24302.

6.8 The inspection of other kinds of rice kernels: implement in the method stipulated in GB/T 5493.

6.9 The inspection of color and odor: implement in the method stipulated in GB/T 5492.

6.10 The Inspection of taste evaluated value shall follow GB/T 15682, shall use samples LS/T 1534 and LS/T 1535

6.11 Amylose content inspection: implement in the method stipulated in GB/T 15683.

6.12 Net content inspection: implement in accordance with JJF 1070.

7. Rules for Inspection

7.1 Sample and sample reduction

Implement in accordance with GB/T 5491

7.2 General rules for inspection

Implement in accordance with GB/T 5490

7.3 Grouping products in batches

The products milled from the same materials, in the same process, with the same equipment and by the same shift shall be grouped into one batch.

7.4 Delivery inspection

The delivery inspection items shall be in accordance with 5.1.

7.5 Pattern Inspection

Inspection shall follow the rules according to Chapter 5. Pattern inspection shall be conducted under any of the following circumstances:

- a) Production of a new product
- b) When raw material, technique and equipment has big change, product nature and function may be changed.
- c) Resume production after one year of suspension
- d) Production for consecutively three years
- e) Testing results show big difference from last pattern test
- f) Inspection raised by relevant quality regulation departments

7.6 Judgment rules

7.6.1 The products will be judged as not edible if not conforming with GB 2715 and the relevant national stipulations about hygienic inspection and plant quarantine.

7.6.2 The products will be judged as non-gradable if the milling degree does not meet the requirement of this Standard.

7.6.3 For high-quality rice, if any of the grading indicators fail to meet the quality requirements for the corresponding grade in Table 2, the rice will be degraded for one; if any of such indicators fail to meet the requirement of the lowest grade, the rice can be judged according to the quality indicators of the rice in Table 1;

7.6.4 For rice, if any of the grading indicators fail to meet the quality requirements for the corresponding grade in Table 2, the rice will be degraded for one; if any such indicators fail to meet the requirement of the lowest grade, the rice will be considered as non-gradable; if any one of the other indicators fail to meet the requirement in Table 1, the rice will be considered as non-gradable.

8. Package and labels

8.1 Package

8.1.1 The package shall meet the stipulations and hygienic requirements in GB/T 17109.

8.1.2 If package bags are adopted, they shall be firm, and the seals or stitch closures shall be tight.

8.2 Labels

8.2.1 The labels for the rice packages shall meet the stipulations in GB 7718 and GB 28050. The product names shall be marked according to the names and grades stipulated in the Standard

8.2.2 outside package delivery marks shall meet the requirement of GB/T 191

8.2.3 The net contents marked shall be the mass of the product in the maximum allowable water content.

8.2.4 high quality rice is suggested to mark the best before date (taste evaluated value standards is the best before date standards)

9. Storage and Transportation

9.1 The bagged products shall be stored in clean, dry and qualified warehouses which can prevent contamination from rain, damp, worms, mice or odors; no product shall be stored together with toxic/harmful matters or matters with high water content.

9.2 The rice products shall be transported with transportation means and containers meeting the hygienic requirements, and rain and pollution shall be avoided during transportation.

9.3 Under the conditions of above mentioned packaging, transportation and storage, the product shall have a shelf life no less than 3 months.

References

1. ISO 7301:2011 Rice - Specifications.
2. CODEX STAN 198-1995 Codex Standards for Rice.

END UNOFFICIAL TRANSLATION